MicroFiler™

Operator's Manual

MicroFiler™

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TABLE OF CONTENTS

1. Introduction 1
2. Getting Started 3
3. Creating a Data File 4
4. Entering Data 9
5. Retrieving Data 13
6. Searching 15
7. Saving Files to Disk or Tape 21
8. Loading Files from Disk or Tape 23
9. Formatted Printing 24
10. Miscellaneous 32

Appendix A - Glossary 35
Appendix B - Messages 38
Appendix C - Sample Data Files 41
Index 46

INTRODUCTION

I. OVERVIEW

Congratulations! You have just purchased one of the finest software tools available for your Commodore 64 computer. **MicroFiler** is designed to allow you to easily and conveniently enter, organize, store and retrieve nearly any kind of information you might keep in a 3x5 card file. But more than just storing data, **MicroFiler** allows you to browse through the information, search for specific entries quickly and easily, add or find averages of numeric information, and, if you have a printer, print the information in any format desired from simple lists to mailing labels. **MicroFiler** will also allow you to output a file to disk or tape that is compatible with most word processors.

Uses for **MicroFiler** include mailing lists for holiday greeting cards, clubs, or small businesses; household inventories; cataloging collections such as stamps, books, and records; recipes; expense records; and much, much more.

II. DEFINITIONS AND TERMS

Familiarity with the terms in this manual will allow you to learn **MicroFiler** more quickly. These terms are defined in the glossary (Appendix A).

III. REQUIRED EQUIPMENT

- Commodore 64 Computer
- Commodore 1530 Datasette
  OR
- Commodore 1541 Disk Drive
- Blank tape or disk

IV. OPTIONAL EQUIPMENT

- 40 or 80 column printer

GETTING STARTED

I. PREPARING FOR DATA STORAGE

If you will be using a cassette recorder to store your data files, be sure that your recorder is connected to the computer. (See your cassette recorder manual if unfamiliar with this operation.) Have a tape ready on which you will record your file. (Remember: any data or programs already on the tape will be lost. Be sure the tape is either blank or contains only unwanted data or programs.)

If you will be using a disk drive to store your data files, be sure that your disk drive is attached and turned on. (See your disk drive manual if unfamiliar with this operation.)You will need a disk on which to save the file. If the disk is unformatted when you try to save the data file to disk, **MicroFiler** will prompt you for a disk name and format the disk before it saves your data file.

II. LOADING CARTRIDGE

Turn off your Commodore 64 computer. Insert the **MicroFiler** cartridge into the cartridge slot, label side on top. Be sure cartridge is firmly in place. Turn the computer and accessories on.

III. MAIN MENU

After turning on the computer, the **MicroFiler** main system menu will appear on the screen. From this menu you may select one of three options:

1. CREATE FILE
2. LOAD FILE
3. RESUME

Detailed explanations of these options follow.

CREATING A DATA FILE

MicroFiler has been designed to allow you to create data files quickly and easily. After selecting Option 1 from the Main Menu, "Create file", the screen will be blank (other than the heading "CREATE DATA ENTRY SCREEN") with the cursor in the upper left corner. To create your data entry screen, move the cursor anywhere on the screen and type the field labels, fields, titles and other enhancements you desire. To move the cursor use the two cursor keys and the shift key. All Commodore 64 colors and editing features are available to you when creating a file, including insert and delete.

Data fields can be one of three types: normal, character, or numeric. Normal fields can have any alphabetic or numeric characters and any special symbol except the up-arrow<↑>,the back arrow <←>,and the English Pound character <£>. A character field is just like a normal field except that an entry is required in this field when entering data. A numeric field must contain a valid number or be left blank.

Data fields are defined on the screen with reverse characters. To type reverse characters first press <CTRL> '9' and type the characters desired. Normal data fields are defined by all reverse blanks. Character data fields are defined by typing a reverse 'C' in the first position of the field, and numeric fields are defined by typing a reverse 'N' in the first position of the field (See Fig. 1). A reverse space can also be defined by typing a shift space.

NOTE: Reverse characters are used only to define data fields. For example, you could not use reverse characters in the title.

Now let's create a sample data file. Suppose you are the Secretary/Treasurer of the local computer club known as the Honorable Association of Computer Kindred (HACK). You are in charge of keeping records on all members including name, mailing address, phone number, date joined, dues, etc. You have (wisely) decided to use **MicroFiler** to make this task a snap. Let's go through the create data file process step by step. Be sure you have a cassette or disk ready on which to store data.

I. TITLE. It is not necessary to have a title displayed on the screen but it usually adds a nice touch. At the top of the screen in the center type:

H*A*C*K
CLUB ROSTER

(See Fig. 1). Remember: you can use any of the editing features so if you initially type the title too far to the left or right use the insert or delete to center it.

II. FIELD LABELS. The first field you need is one for last name. Move the cursor down the screen a few lines and then to the left margin and type:

LAST NAME:

(see Fig. 1).

III. FIELDS. You have decided the name field should be a character field 20 spaces long. To the right of its label you should type a reverse 'C' followed by 19 reverse spaces (see Fig. 1). Notice that once you press the <RETURN> key or any cursor direction key the reverse mode is disabled. You will not usually have to press <CTRL> '0' to disable the reverse mode.

Continue creating your data entry screen by typing the remaining labels and fields as shown in Fig. 1.

IV. GRAPHICS CHARACTER ENHANCEMENTS. Any character on the Commodore 64 keyboard can be used in the data file design including the graphics characters. The box around the title of the sample club file uses some of these graphics characters (see Fig. 1).

V. ALL DONE. When you are finished creating the data entry screen simply press <F1>. You are now ready to enter data.

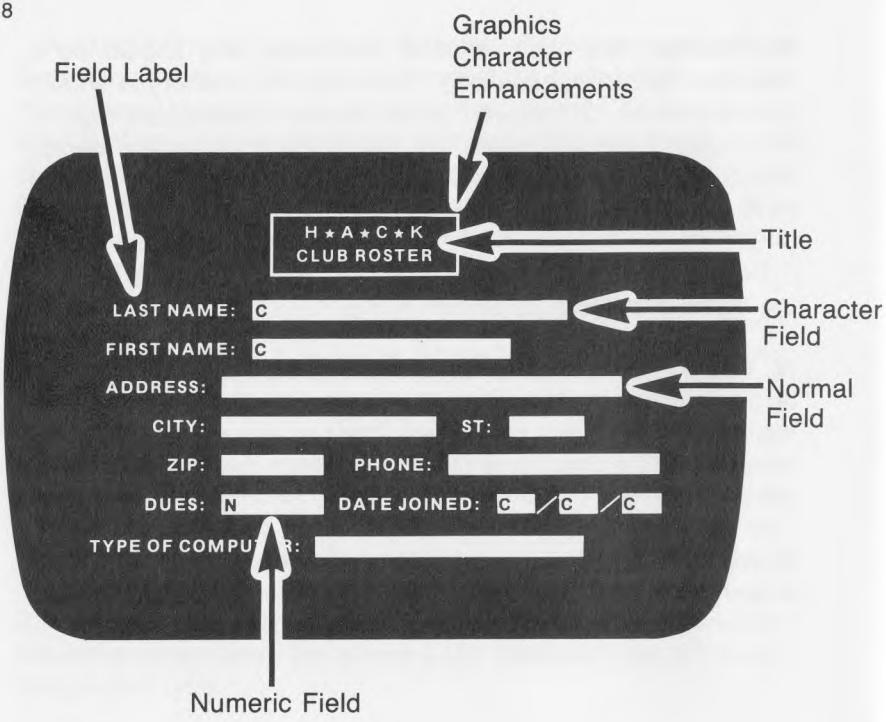

Field Label
Graphics
Character
Enhancements
H★A★C★K
CLUB ROSTER
Title
LAST NAME: C
Character
Field
FIRST NAME: C
ADDRESS:
Normal
Field
CITY:
ST:
ZIP:
PHONE:
DUES: N
DATE JOINED: C C C
TYPE OF COMPU R:
Numeric Field

FIG. 1

ENTERING DATA

After you have completed the data entry screen the computer will display a list of options at the top of the screen and a message line at the bottom. To select an option, type the highlighted (reverse video) letter of the desired option. Now select the data entry option by typing an 'E'.

I. CURSOR CONTROL

After selecting the Enter option, one of the first things you will notice is a flashing cursor on the screen. Further experimentation with the cursor control keys will reveal cursor movement only to data fields. Entering data is a simple matter of typing the desired information into each field. Pressing <RETURN> will automatically advance the cursor to the next field as will <CRSR DOWN>. Typing to the end of a field will also cause the cursor to automatically advance to the next field. <CRSR UP> will move the cursor one field back. <CRSR LEFT> and <CRSR RIGHT> will move the cursor forward and backward in a field until one or the other ends of the field is reached, then the cursor will jump to the next field forward or backward. <DELETE> will delete the previous character and move the cursor back one space.

II. CORRECTING ERRORS

If an error is made before moving to a different field simply backspace or delete and correct the error.

If an error is detected after you have left that field simply move the cursor back using the cursor control keys (or <RETURN>) and correct the error.

III. COMPLETING THE ENTRY

When the fields of a record have been completed and all corrections made, press the <F1> key to enter the record into memory. When you press the <F1> key several things will happen. The message "RECORD STORED" will be displayed at the bottom of the screen, the fields will be blanked, and the cursor will return to the first field. You are now ready to enter more data.

IV. CHARACTER FIELDS

As discussed earlier, character fields can contain any characters but they MUST contain an entry. If a field defined as character is left blank when you press <F1> to complete the entry, the cursor will return to that field and the message "ENTRY REQUIRED HERE" will be displayed at the bottom of the screen. Complete the entry for that field and press <F1> again.

V. NUMERIC FIELDS

Numeric fields are not required to have an entry but if they do the entry must be a valid number. Permissible characters are '0' to '9', a decimal point, and a minus sign. If a numeric field contains an invalid character, when the <F1> key is pressed the cursor will return to that field and the message "INVALID CHARACTER IN NUMBER" will be displayed. Correct the entry (or erase it) and press <F1> again.

For practice (and for future demonstration of other features of **MicroFiler**) type in the records as shown on the following page. When you have entered all the records desired press the <F7> key. This will return you to the option mode where you may now select one of the options displayed at the top of the screen.

SAMPLE RECORDS FOR
H*A*C*K CLUB

Fred Smith
1234 N. Elm Ave.
Portland, OR 97223
Phone: 503 222-3333
Dues: 5.00
Joined: 01/15/83
Computer: Atari

Ed Jones
1942 Oak St.
Portland, OR 91234
Phone: 503 111-2222
Dues: 4.50
Joined: 09/01/82
Computer:

Jim Adams
1123 NW 49th
Portland, OR 91234
Phone: 503 333-4444
Dues: 5.00
Joined: 06/01/83
Computer: Commodore 64

Bill Henderson
P. O. Box 432
Portland, OR 96123
Phone: 503 999-8888
Dues 3.5
Joined: 08/23/84
Computer: Commodore 64

Jeff Carter
Box 2345
Sometown, NY 12345
Phone:
Dues: 6.00
Joined: 10/15/82
Computer: Apple

Fig. 2

RETRIEVING DATA

Select this option by typing an 'R'. A new list of options will be displayed at the top of the screen.

a. FWD. This option allows you to step forward through the entries one at a time.

b. BWD. This option allows you to step backward through the entries one at a time.

c. RST. This option resets the file to the beginning and clears the screen.

d. SCH. This option allows you to search any field for a particular entry then display all records found. Searching is explained in more detail in the following section.

e. CNG. Select this option to change any entry. Move the cursor to the desired field, make the change or changes, then press <F1>.

f. PRT. If you have a printer, selecting this option will print the contents of the screen. Any non-printable characters, such as the graphics characters, will be omitted.

g. DLT. Select this option to delete an entry. First step forward or backward to find the entry to be deleted (or use the search option) and type 'D'. To avoid accidentally deleting records, a message asking you to verify your intentions to delete the record will be displayed. Respond with a 'Y' to delete the record or any other key to abort this procedure.

h. SUM. This option will display a sum of each numeric field. The dues amounts in the sample data are 5.00, 4.50, 3.5, 5.00, and 6.00. Selecting this option with this data would result in "24" being displayed in the "DUES" field.

i. AVG. This option will display an average of each numeric field. Selecting this option with the sample data provided would result in "4.80" being displayed in the "DUES" field. When necessary, averages are rounded to two decimal places.

SEARCHING

After selecting the search option, you will be prompted for a search key. Any field can be used as a search field. First move the cursor to the field on which you wish to search, then enter the desired search key. Press <F1> to begin the search. To step through the retrieved records simply press <F1> again. The search will terminate automatically when the end of the file has been reached or may be discontinued at any time by pressing the <F7> key.

Delete, Change, and Print can be accessed while in the search mode without cancelling the search. After one of these selected options is completed you will be returned to the search mode and the message "PRESS <F1> TO CONTINUE SEARCH" will be displayed. Any of the other retrieve options will cancel the search mode.

The following is a discussion of each type of search key. If you typed in the suggested data for the computer club file as described in the preceding sections, you will be able to try each of the following searches.

I. GENERAL SEARCH

After moving the cursor to the desired field, simply type the characters for which you are searching. For example, to find everyone in the computer club file whose first name is 'ED' simply move the cursor to the first name field, type 'ED', then press the <F1> key. If there are any 'ED's in your file the first one will be displayed on the screen. You will be prompted to press <F1> to continue the search. In the general search mode the entire field is searched for the search key you provided. Therefore, if there was a 'FRED' in your file that record would also have been retrieved.

A question mark (?) can be used as a "wild card" character, meaning "any character can be here". For example, if you want to retrieve everyone in your file whose zip code begins with '123', simply typing '123' for a search key would retrieve zip codes with '123' anywhere in the code. In other words, it would retrieve '12345', but it would also retrieve '96123' or '41235'. To solve this problem, the question mark can be used to describe a more specific search key. To find everyone whose zip code begins with '123' type '123??' for a search key. This will also solve the 'ED' finds 'FRED' problem described in the previous paragraph. Simply type 'ED' and fill the remainder of the first name field with question marks.

II. SORTED SEARCH

If you want to find everyone in your club list file whose last name begins with 'H', you could type an 'H' and fill the remainder of the last name field with question marks. Another way to do this is to type an 'H' followed by the up-arrow <↑> (next to the 'RESTORE' key). The up-arrow terminates the search key and defines the part of the field to be searched. In other words,'H↑' means "search for an 'H' in the first position of this field." The entire file will also be sorted on this field. This option allows not only all of the last names beginning with 'H' to be found, but they will also be retrieved in alphabetical order.

If you would like to limit the search key to the beginning of the field but do not want the file to be sorted on that field, use the back arrow <←> (next to the '1' on the keyboard) in place of the up-arrow as described above.

III. RANGE SEARCHING

Suppose that you wish to find everyone in your file whose last name begins with 'H' through 'L'. This can be done in one of two ways. If you want the retrieved records to be in alphabetical order, then specify the range with the up-arrow: 'H ↑ L'. If you do not want the file sorted but you would like to specify a range then use the back arrow: 'H ← L'.

Any number of characters can be specified on either side of the up-arrow or back-arrow . For example these search keys would find everyone whose last name begins with 'HAR' to 'HEC': 'HAR ↑ HEC' or 'HAR ← HEC'.

IV. MULTIPLE FIELD SEARCHING

Suppose you are trying to find someone in your club list but you just can't remember his last name! You know that it starts with an 'H' and you remember that his first name is 'BILL' (or was it 'WILLIAM'?). To solve this otherwise complicated searching problem type 'H↑' in the last name field and 'ILL' (this will find 'BILL' or 'WILLIAM') in the first name field, then press <F1>. You should now be able to find the mystery person quickly by stepping through the names retrieved one at a time (pressing the <F1> key) until you locate him.

Any number of multiple keys can be used. However, be aware that if you use an up-arrow in more than one field, the file will be sorted on each of these fields in the reverse order that the fields appear on the screen. In other words, with the club list file described in the preceding paragraphs, if you typed 'H ↑ L' in the last name field and 'A ↑ K' in the first name field the file will first be sorted on the first name field and then on the last name field. In most cases this will be no problem, but it is advisable to define only one search field and define ranges or limits in other fields using the back arrow.

V. FULL RECORD SEARCHING

In some situations you may want to search the entire record rather than just one field. This is done by typing the search key, followed by the English Pound character <£>, (found next to the '-' key) in any field. This will cause the entire record to be searched for the character(s) specified by the search key.

VI. SORTING ONLY

To sort the file on a field simply type an up-arrow in the desired field and press <F1>.

SAVING DATA FILE TO DISK OR TAPE

A data file can be saved to either disk or tape. If a disk drive is attached to your system and turned on, the file will be saved to disk. Otherwise, the file is saved to tape.

It is necessary to save a file when it is first created and anytime records are added, changed, or deleted. If the file has been loaded for information retrieval only, it is not necessary to resave the file.

I. SAVING TO TAPE

Select the 'SAVE' option from the main option list by typing an 'S'. **MicroFiler** will ask for a file name (up to 16 characters), or give you a file name if you had previously loaded the file. When you press <RETURN> the computer will respond with "PRESS PLAY AND RECORD". Press the <RECORD> and <PLAY> buttons on the recorder to begin saving the data.

MicroFiler has been specially designed to provide for fast and reliable tape storage and loading. However, it is strongly recommended that you always save two copies of your file before turning off the computer. This will help avoid loss due to bad tape or accidental erasure.

II. SAVING TO DISK

When you are ready to save a data file to disk, select the save option from the main option list by typing an 'S'. You will then be prompted for a file name, or given the file name previously loaded. Enter a file name (up to 16 characters), or press <RETURN> to use the name given. If the file name is the same as one already on the disk, **MicroFiler** will ask if you want it to replace the old file with the new file. If you respond with a 'Y' the old version will be deleted from the disk and the new version will be saved. If you respond with any other key, you will be returned to the file name question.

If you try to save your data file to an unformatted disk, **MicroFiler** will ask if you would like to format the disk. If you respond with a 'Y', it will ask for a disk name (up to 16 characters) and format the disk. If you respond with any other key the computer will return to the file name question. You can also type <CTRL> 'F' at the file name question if you want to format a disk.

LOADING A DATA FILE

Select menu option 2, "LOAD FILE", from the **MicroFiler** menu. If your disk drive is attached and turned on **MicroFiler** will load from disk, otherwise the file will be loaded from tape.

You will then be asked to enter a file name (up to 16 characters). If you cannot remember the name of the file or the correct spelling and you have a disk drive attached, you can press '?' and **MicroFiler** will print a directory of the disk on the screen.

If you are loading from tape be sure the tape is rewound and ONLY the play button is pressed. **MicroFiler** will display the names of the files it finds on the tape, and load the file that matches the file name you entered. If you discover that you misspelled the name, press <RUN/STOP>, rewind the tape and start over.

NOTE: Files created by **MicroFiler** will not load into your Commodore 64 without using **MicroFiler**

FORMATTED PRINTING

If you have a printer you will be able to print your data files in a nearly unlimited variety of formats using this option. Let's explore these possibilities using the computer club roster example described previously.

Select the formatted print option from the main option list at the top of the screen. A new option list with three options will appear at the top of the screen, and numbers and/or letters will appear in the fields of your screen. All data files are saved initially with a default format which will print all of the fields in columns across the page. To see this format type 'P'. Press <F1> when prompted for search key (this will be explained a little later). Assuming you have typed in the sample data, the computer club file will now be printed using the default format.

To change the printing format, select the 'C' option. Then type one or two characters (as explained below) at the beginning of each field you want to print. These characters tell the printer what to do AFTER each field is printed. The possible characters are '0' through '9' and 'S', 'D', 'T', and 'P'. The number indicates how many spaces you want between this field and the next field that is to be printed on the same line. The 'S', 'D', and 'T' stand for single, double or triple spacing after the indicated field. The 'P' stands for pack data, which will suppress all but one ending space

in that field. If after printing a field you want the next field to be printed on the next line, you would type an 'S' for that field's print format character. If you want double spacing between lines you would type a 'D', and so on.

A second number can be entered to change the order in which you want the fields printed. If you want them in the order they are on the screen this number is not needed. If you want to change the order, enter a number after the character which tells **MicroFiler** what to do at the end of that field. Let's look at some examples:

If this is the desired output:

SMITH FRED PORTLAND OR 97223

then the following format characters (typed in the FIRST position of each field) would be supplied: a '2' in the last name field, a '2' in the first name field, a '2' in the city field, a '2' in the state field, and a '0' in the zip code field (see Fig. 3). Notice that there are more than two blanks between the fields when printed. Since we specified a '2' as the format character, why are there more than two blanks? The additional blanks are from the fields themselves. Remember, the last name field is 15 spaces long. "SMITH" is only five characters so there are 10 blank spaces remaining in that field.

Desired ouput:

SMITH FRED PORTLAND OR 97223

Print Format:

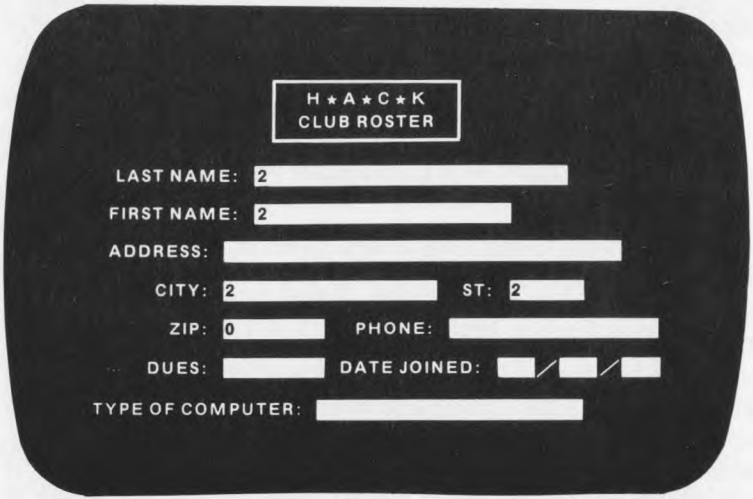


Fig. 3

If this is the desired output:

SMITH FRED
1234 N. ELM AVE.
PORTLAND OR 97223

then the following format characters would be supplied: a '2' in the last name field, an 'S' in the first name field, an 'S' in the address field, a '2' in the city field, a '2' in the state field, and a '0' in the zip code field like this:

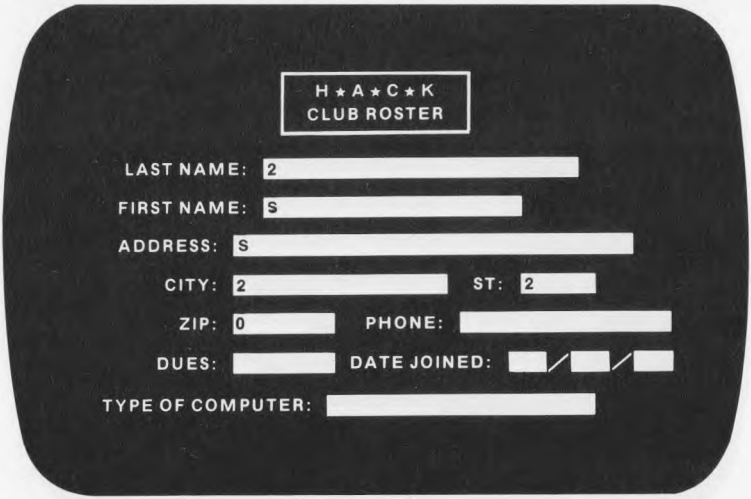


Fig. 4

If this is the desired output:

FRED SMITH
1234 N. ELM AVE.
PORTLAND OR 97223

then the following format characters would be supplied: a 'S2' in the last name field, a '21' in the first name field, an 'S' in the address field, a '2' in the city field, a '2' in the state field, and a '0' in the zip code field like this:

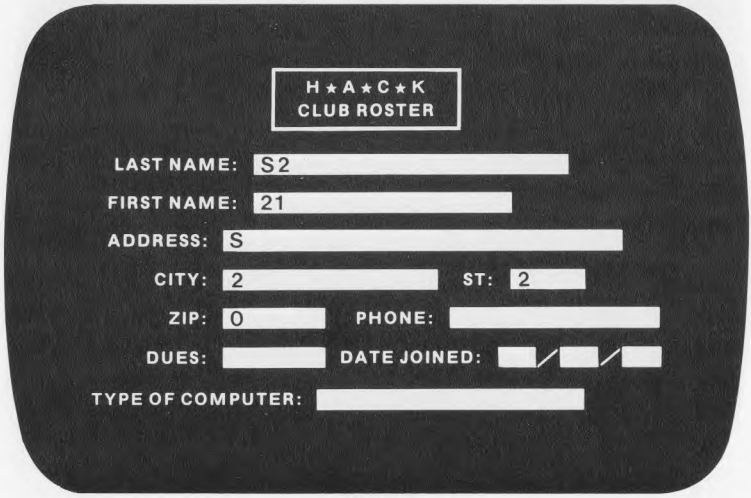


Fig. 5

If this is the desired output:

FRED SMITH
1234 N. ELM AVE.
PORTLAND OR 97223

then the following format characters would be supplied: a 'S2' in the last name field, a 'P1' in the first name field, an 'S' in the address field, a '2' in the city field, a '2' in the state field, and a '0' in the zip code field like this:

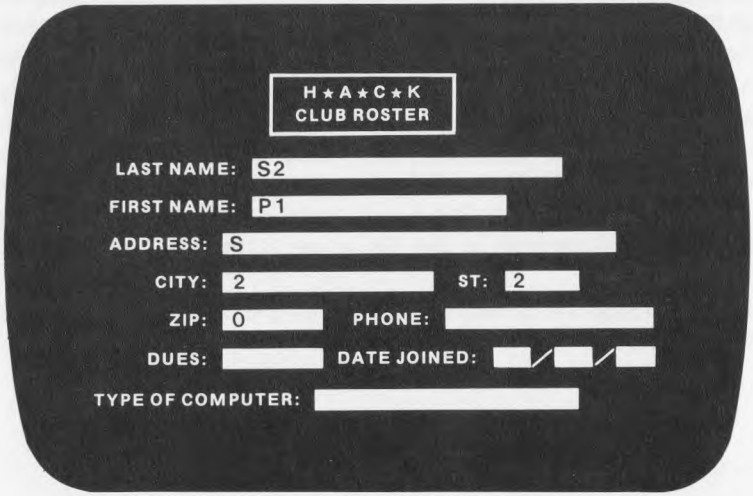


Fig. 6

NOTE: Order numbers are not necessary in fields which will be printed in the same order as the screen layout.

After you have supplied the desired format characters press <F1>. You will now be prompted for the left margin. You may enter '0' if you want the output to print at the far left side of the page or, for example, '15' if you want it printed 15 spaces in from the left margin. Any number from 0 to 99 may be entered here although the width of your printer will determine the practical limit for the left margin. Now you will be prompted for the number of lines (from 0 to 99) between records. You will now be returned to the format print menu. To print using the defined format simply press 'P'.

At the "ENTER SEARCH KEY" prompt you should enter a search key as described in Section 5 and press <F1>, or enter nothing if you want all records in the file to be printed.

NOTE: To stop the printout before printing is completed press the <RUN/STOP> key.

To create a file that can be read by most word processors select 'W'. The format you have created will be written to the disk drive or tape in exactly the same format as it would be written to the printer. You will be prompted for a file name to store the data. Enter a file name different from the file currently in the computer. If the file already exists on that disk, **MicroFiler** will ask you if you would like to replace the old file with a new file. Enter a 'Y' if this is what you want to do. You will then be prompted for a search key (see Section 5 for more information on searching). Consult your word processor manual for more information on how to use 'SEQUENTIAL FILES' in your documents.

NOTE: In most circumstances if the format to the printer is the format you would like for your word processor, simply select 'W'. Remember to leave NO lines between labels.

MISCELLANEOUS

I. MEMORY REMAINING

MicroFiler loads and maintains your entire data file in memory. This allows for very fast data retrieval and for storage to disk or tape. To find out how much memory you have left for storing records select the Memory option from the main option list.

II. <F7>KEY

The <F7> key can be used at any prompt to cancel that option and return you to an option menu. Pressing <F7> before any other entry will usually cancel that change without destroying the previous data.

III.<RUN/STOP>

The <RUN/STOP> key can be used to stop a save, load, sort, or form print.

IV. SYSTEM RESET

The <RUN/STOP><RESTORE> sequence can be used at any time to return to the **MicroFiler** menu screen.

V. RESUME

Menu option 3, "RESUME", will allow you to return to a data file in memory and continue working with it (if a data file has been loaded into memory).

VI. MODIFY A DATA ENTRY SCREEN

Once you have designed a data entry screen or loaded an existing data file from tape or disk you can modify the entry screen if desired. This is designing an all new file by begining with the old screen. Any records in memory will NOT be modified to match the new screen and will, therefore, be lost.

Hold down the <CTRL> key while selecting menu option 1, "CREATE FILE", from the **MicroFiler** menu. This time you will have your old data entry screen and the cursor. Use the cursor control keys to move the cursor anywhere on the screen and make the desired changes. Press <F1> when finished. You will now have a new data entry screen and an empty file.

V. WHEN A FILE GETS FULL

When you want to add more records to a file but you have run out of memory, you can simply continue the file. First, save the file to disk or tape. Next, load the file press <RUN/STOP><RESTORE> then hold down the <CTRL> key while selecting menu option 1, "CREATE FILE." Your old data entry screen should appear under the heading, "CREATE DATA ENTRY SCREEN." Press the <F1>key. You now have your old data entry screen with an empty file. Enter new records into the file and save these on the new disk or tape.

APPENDIX A - GLOSSARY

BACK ARROW. The character '←'. The key in the top left corner of the keyboard.

DATA. A general term for any information used by a computer.

DATA ENTRY SCREEN. All of the field labels, data fields, graphics character enhancements, etc., that together make up the screen with which data will be entered into the file. Fig. 6 is an example of a data entry screen.

DATA FILE. See FILE.

FIELD. Fields are the reverse video areas on the screen containing the specific information making up a record. For example, in a holiday greeting card file each record would contain fields for the person's name, street address, city, state, zip code, and perhaps other fields for information such as cards received and sent (Fig. 6).

FILE. A file is any collection of like information. For example, a collection of the names and addresses of all the people to whom you send holiday greeting cards is a file.

ENGLISH POUND KEY. The character '£'. The key between the '-' and the <CLR/HOME> keys.

GRAPHICS CHARACTERS. The set of characters obtained by holding the <C= > key or the <SHIFT> key while pressing the alphabetic keys. These characters can be used to enhance the appearance of your data entry screens (Fig. 6).

KEY. See SEARCH KEY.

MAIN MENU. This is the list of options presented on the first screen of **MicroFiler**. This screen is displayed when turning on the computer with the **MicroFiler** cartridge in place and anytime <RUN/STOP><RESTORE> is pressed.

MESSAGE LINE. Line at the bottom of the screen used for instructions and error messages (Fig. 6).

OPTION LIST. There will be a list of operation options at the top of the screen, except when designing a new data file or when the main menu is on the screen. Selecting an option is simply a matter of typing the one letter in each option that is highlighted (reverse video). Options are explained in detail in the body of this manual (Fig. 6).

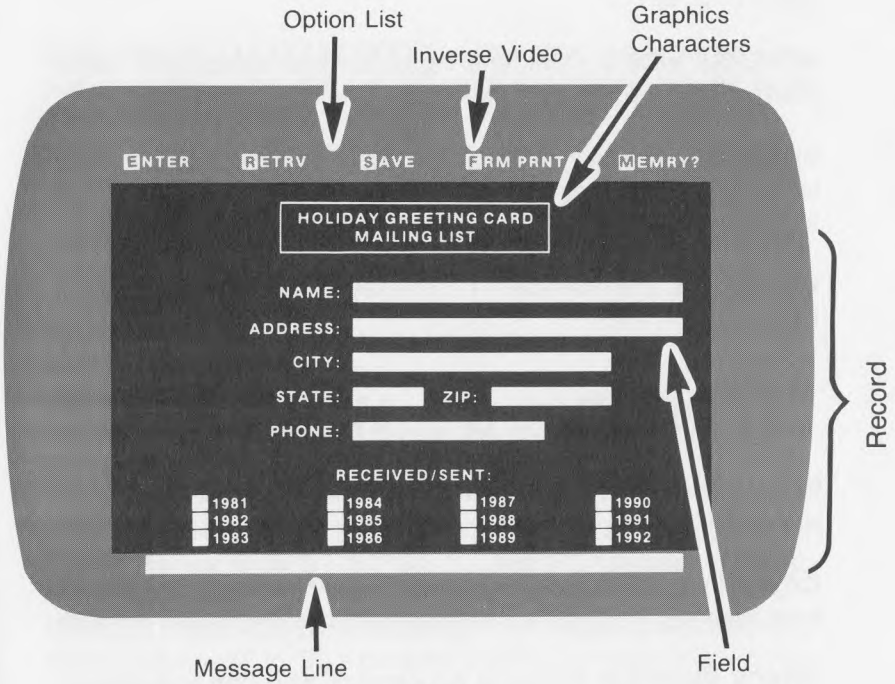

Option List
Inverse Video
Graphics Characters
ENTER
RETRV
SAVE
FRM PRNT
MEMRY?
HOLIDAY GREETING CARD MAILING LIST
NAME:
ADDRESS:
CITY:
STATE:
ZIP:
PHONE:
RECEIVED/SENT:
1981
1982
1983
1984
1985
1986
1987
1988
1989
1990
1991
1992
Record
Message Line
Field

Fig. 6

RECORD. The name and address of one relative or friend would be a record in a file of people to whom you send holiday greeting cards (Fig. 6).

REVERSE VIDEO. Dark lettering on a white background rather than white lettering on a dark background (Fig. 6).

SEARCH KEY. The information provided to tell the computer what to search for. The search key "ED" placed in the first name field tells the computer to find all entries with "ED" in that field.

UP ARROW. The character ' ↑ '. The key next to the <RESTORE> key.

APPENDIX B - MESSAGES

BEGINNING OF FILE: Record currently displayed is the first record in the file.

CASSETTE LOAD ERROR: An error occurred while reading a file from cassette. Rewind the cassette and repeat the load procedure.

CHECK PRINTER: Printer is not properly attached to system or is not turned on and selected.

DISK DRIVE NOT ATTACHED: An attempt to format a disk or display a directory was made with no disk drive attached and/or turned on.

DISK ERROR XXXXXXXXXXXXX: A disk error has occurred. Consult your disk drive manual for more information on the error message.

EMPTY FILE: There are no records stored in this file.

END OF FILE: Record currently displayed is the last record in the file.

ENTRY REQUIRED HERE: The field indicated is a character type field and must have an entry.

FORMAT DISK (Y/N): The disk in the disk drive is unformatted. Enter a 'Y' if you wish to format the disk.

INVALID CHARACTER IN FORMAT: An invalid character (valid characters are '0' to '9', 'S', 'D', 'T', and 'P') has been entered.

INVALID CHARACTER IN NUMBER: An invalid character (valid characters are '0' to '9', a decimal point (.) or minus sign (-)) has been entered in a numeric field.

MEMORY FULL: There is no more room in memory. Additional records will need to be stored in a new file.

MUST HAVE RECORD DISPLAYED: The procedure selected from the option list requires a record to be displayed.

NO FIELDS DEFINED: No fields were defined by reverse video on the screen when <F1> was pressed. Enter fields and press <F1>.

NO PRINT FORMAT DEFINED: No print format was defined when <F1> was pressed. Enter a format and press <F1>.

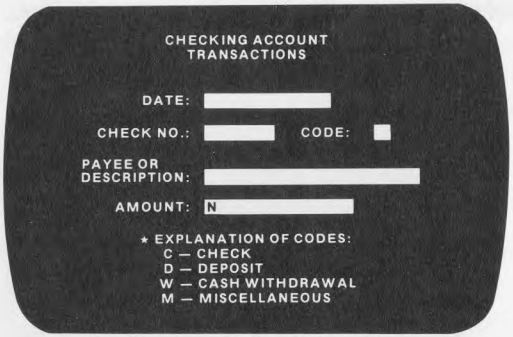
NO SEARCH KEY SPECIFIED: A search key is required but has not been entered.

NUMERIC OVERFLOW ERROR: The sum of the numbers in a numeric field exceeds 9999999999.9999.

TOO MANY FIELDS: Too many fields were defined by reverse video on the screen when <F1> was pressed. Delete some fields or combine fields and press <F1>.

APPENDIX C
SAMPLE DATA FILES

The following sample data files show some of the various ways in which **MicroFiler** can be used. This list is by no means exhaustive. In fact, the uses for **MicroFiler** are limited only to the imagination of the user!



Use this file for recording all of your checking account transactions including checks, deposits, cash withdrawals, service charges, interest payments, etc. Be sure to enter any transaction which reduces your balance (checks, cash withdrawals, service charges, etc.) as negative numbers. For example, a check written for $12.34 would be entered -12.34. To determine your balance at any time simply select the "SUM" option. Your current balance will be displayed in the "AMOUNT" field.

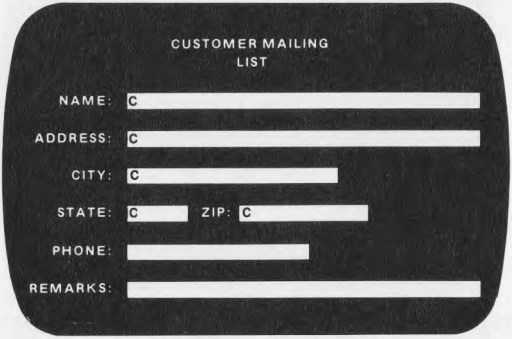
The transaction code allows you to retrieve records of specific types of transactions. For example, if you would like to see all the checks that have been recorded then select the search option and type a "C" in this field as a search key. If you have a printer you can print a list of the checks written to aid in balancing your checkbook.

The first record should be one in which you enter your beginning balance, much the same way you do in your check register. When you need more room follow the procedure for starting a new file with an old screen design ("WHEN A FILE GETS FULL", Section 9).

This file is designed for cataloging a collection of classical music recordings. You may not have a collection of this type but this example should give you some ideas of how to design a file for other

types of collections such as books, coins, stamps, etc.

The usefulness of a file such as this is the ability to search for specific entries. For example, if you needed to find a particular symphony by Beethoven you would simply select the search option, then type the title of the work in the "TITLE" field and "BEETHOVEN" in the "COMPOSER" field as search keys. The code of the record retrieved should tell you exactly where to find that recording. Similarly, all recordings of a particular style can be retrieved by searching for an "X" in the field next to the desired style.



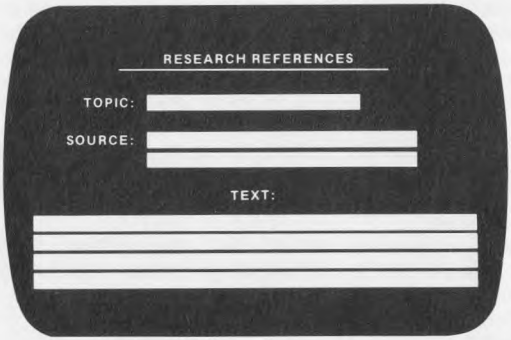
One of the most valuable assets of a small business is an accurate list of its customers. This file would be very useful in maintaining such a list. Additions, changes, deletions, and searching for and retrieving customer data can be done quickly and easily.

A printer will allow you to use this file for printing mailing labels. This use alone will save many hours of typing! Add a few more fields relevant to your business and you can make it even more useful. For example, an insurance agent could include a field for policy expiration date then use this as a search key field to determine which customers should receive renewal notices. A traveling salesperson could use the city or zip code fields as search fields to mail letters to customers on which he plans to call next month. The possibilites are really endless!

To print mailing labels from this file you would need to do the following:

1. From the main option list select the "FRM PRNT" option.
2. From the next option list select the "Change Format" option.
3. Type the following print control codes:
   - an "S" in the "NAME" field
   - an "S" in the "ADDRESS" field
   - a "2" in the "CITY" field
   - a "2" in the "STATE" field
   - an "S" in the "ZIP" field
4. Press the <F1> key
5. Experiment to determine how many lines to leave between labels. Start with 3 and adjust if necessary.

6. For single-wide labels set the left margin at 0. For multiple-width labels you can print some at 0 then reset the left margin to print on the remaining labels.
7. After you have tested the print format and are satisfied that it is correct, save the file back to disk or tape. The print format is always saved with the file to avoid reentering it each time.



Use a file such as this to keep research notes. Enter the topic, source, and text of a reference. This will allow you to search for a particular topic, source, or even a specific word within the text itself. When searching the text (which is actually several long fields together) use the full-record search as described in section 5 (p. 13).

INDEX

Average	14
AVG	14
Back arrow	5,18,35
Backward	13
BWD	13
Cartridge	3
Cassette Recorder	2,3,21,23
Change	13,15
Character Fields	5,7,8,11
CNG	13
Corrections	10
Create File	4-8
Cursor Control	4,7,9,10
Delete	4,14,15
Disk Drive	3,21,23
DLT	14
English Pound Key	5,20,36
Error Messages	Appendix B
Field Labels	4,6,8
Fields	4-9,15,35
File Name	21,22,23
Format Disk	3,22
Formatted Printing	24-31
Forward	13
Full Record Searching	20
FWD	13
Graphics Characters	7,8,36
H*A*C*K	6,8
Key	15-20, 36,38
Left Margin	30
Loading Cartridge	3
Loading Data	23
Main Menu	4,32,36
Memory	32,34
Menu	4,32,36
Messages	Appendix B
Modify Data Entry Screen	33
Normal Fields	5,8
Numeric Fields	5,8,11
Option List	9,13,14,36
Print Format	24-31
Printing	14,15,24-31
PRT	14
Question Mark	16,23
Recorder	3,21,23
Reset	13,32
Resume	4,33
Retrieving Data	13
Reverse Video	5,7,9,38
RST	13
Saving Data	3,21,22
SCH	13
Search	13,15-20
Search Key	15-20,38
Sorting	17-20
Storing Data	3,10
Sum	14
System Reset	32
Title	4,6,8
Up Arrow	5,17-20
Wild Card	16

WARRANTY

Microbits Peripheral Products, Inc. warrants the MicroFiler Cartridge to be free from defects in material and workmanship and to meet applicable specifications under normal use and service for a period of ninety (90) days after sale to original owner. If any parts have become defective under normal usage rather than misuse, negligence, or accident, Microbits Peripheral Products, Inc. will repair or replace them without charge. This warranty shall not apply to parts or equipment that have been repaired or altered outside our repair facility. Equipment that has been subjected to misuse, negligence, or accident, or that has been altered or defaced, is not covered by this warranty. Repairs that are not covered by this warranty will be billed at current shop charges.

Microbits Peripheral Products, Inc. does not assume any liability for any consequential damages caused by the use of the MicroFiler.

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